REMARKS/ARGUMENTS

Please note that a Request for Continued Examination ("RCE") and the appropriate fee have been filed with this amendment.

Claims 1-17, 19-20, and 32-35 stand rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 5,670,984 to Robertson et al. ("Robertson"). In addition, Claims 21 and 23-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson. Furthermore, Claims 18, 22, and 25-31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson and further in view of United States Patent No. 5,731,805 to Tognazzini et al. ("Tognazzini").

The Examiner is respectfully requested to reconsider the previously presented and original claims in the above listing of claims in view of the following comments. Please note that only the claim status identifiers have been updated/amended in the above listing of claims.

The Applicant believes that Claims 1 and 32 are patentable over Robertson as these references do not teach or suggest the subject matter of Claims 1 and 32. Similarly, the Applicant believes that Claims 2-8 and 10-31, and 32-35, being dependent on Claims 1 and 32, respectively, and adding patentable features thereto, are also patentable over the Robertson and Tognazzini references.

With respect to the "Response to Arguments" section of the Office Action, on page 13 of the Office Action the Examiner states:

> "Applicant argues (pp. 8, Para 1-3) Robertson does not teach the viewpoint remains 'constant' as claimed in the present invention...In reply, Robertson teaches projecting an image into a view volume with respect to 'a viewpoint' (col. 3-4, ll. 65-3). Thus a 'viewpoint' implies that there is a single viewpoint, which is constant when the visual information is projected on the lens surface. Applicant claims that when projecting information onto a lens surface the viewpoint is constant. Robertson teaches that when the lens moves the viewpoint will move based on the movement of the lens (col: 4, ll. 25-30). Robertson's teaching implies that when the lens is not moving, as in the case of the Applicant's claim,

the viewpoint is constant relative to the lens when the visual information is projected onto the lens. Therefore, Robertson teaches a viewpoint that remains constant when information is projected onto a lens surface."

However, in the Applicant's invention, the lens is moving. The lens is "transitioning between first and second locations". For reference, previously presented Claims 1 and 32 recite the following (underlining added for emphasis):

1. (Previously Presented) A method for displaying a region of interest while transitioning between first and second locations for the region of interest within visual information on a display screen of a computer, comprising:

applying a transformation to a border region of the region of interest in the visual information to improve visual detail in the border region of the region of interest by:

creating a lens surface for the border region having a lens surface shape; and,

creating a presentation by overlaying the visual information on the lens surface and projecting the lens surface with the visual information onto a plane in a uniform direction aligned with a viewpoint, wherein at least one of the lens surface shape and the viewpoint remain constant during the transitioning between the first and second locations; and,

displaying the presentation on the display screen.

32. (Previously Presented) A method in a computer system for generating a presentation of a region of interest in an original image for display on a display screen, comprising:

applying a lens to a border region of the region of interest in the original image by displacing the border region onto the lens and projecting the displacing onto a plane in a uniform direction aligned with a viewpoint, wherein at least one of the lens and the viewpoint remain constant while transitioning between first and second locations for the region of interest in the original image.

The Applicant respectfully submits that Claims 1 and 32 clearly recite that the lens is transitioning or moving. A common dictionary definition of the word "transition" is "...movement or passage from one position, state, stage, subject, concept, etc., to another...".

To further illustrate the differences between Robertson and the Applicant's invention, please consider the following diagrams below. Figure 1 shows the movement of a Robertson lens from location x1 to location x2. At location x1, the Robertson lens has a viewpoint located at v1. At location x2, the Robertson lens has a viewpoint located at v2. The location of the viewpoints v1 and v2 are not equal in the x-y plane shown in Figure 1. That is, v1 does not equal v2. In other words, the viewpoint changes as the Robertson lens is moved. The viewpoint does not remain constant when the Robertson lens is moved.

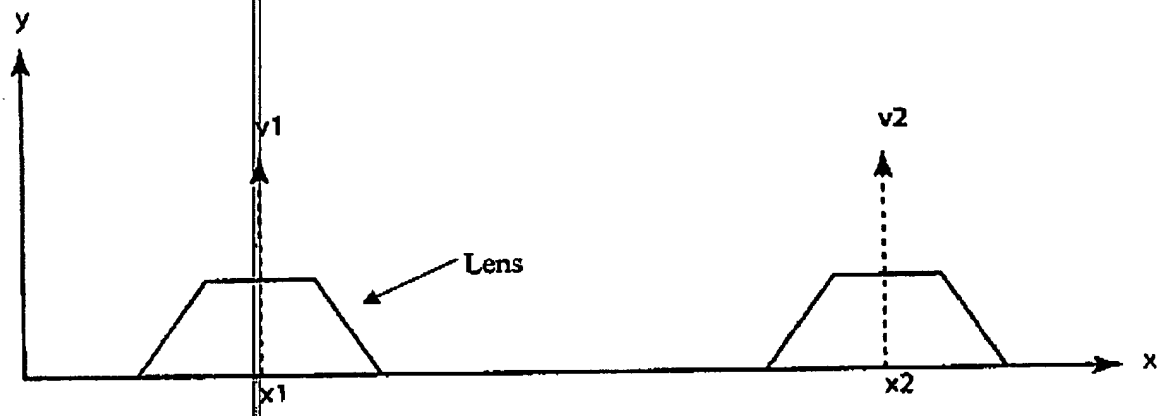

Figure 1

Now, Figure 2 shows the movement of the Applicant's lens from location x1 to location x2. At location x1, the Applicant's lens has a viewpoint located at v. At location x2, the Applicant's lens also has a viewpoint located at v. The viewpoint v does not change. It remains constant. The viewpoint v is at the same location in the x-y plane for both locations x1 and x2. In other words, the viewpoint remains constant as the Applicant's lens is moved or transitioned from location x1 to location x2 as recited in Claims 1 and 32.

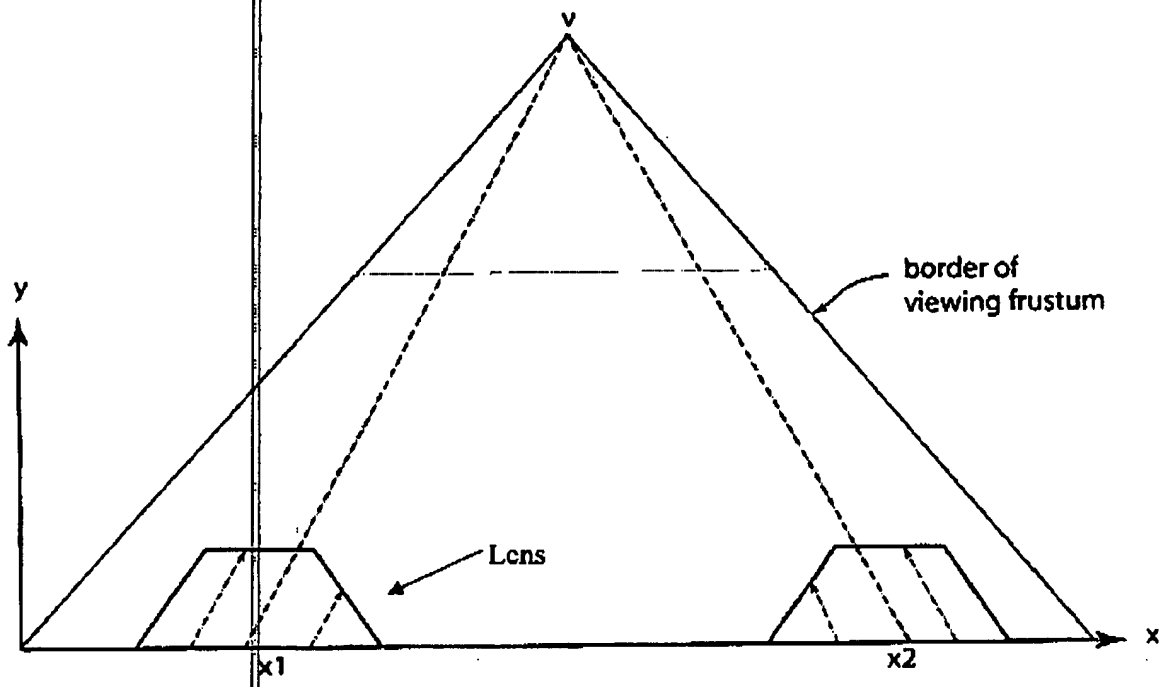

Figure 2

Another element of Claims 1 and 2 is apparent in Figure 2. The projection direction (shown by the dashed arrows in each lens) is aligned with the viewpoint v at each location x1, x2. Thus, the projection direction may be other than in a vertical direction depending upon the location of the lens. In Robertson, on the other hand, the projection direction is always vertical. This feature is clearly recited in Claims 1 and 32.

Again with respect to the "Response to Arguments" section of the Office Action, on pages 13-14 of the Office Action the Examiner states:

> "Applicant argues (pp. 9, Para 1) Robertson does not teach a lens surface shape that remains constant...In reply, Examiner agrees changing one object feature, such as width, without changing another object feature, such as height effectively changes the shape of the object. However, Robertson teaches changing both height and width to effectively change the size of a region. Thus for example when changing both height and width of a square, the result is an enlarged square. Therefore the Examiner maintains that Robertson does not change the shape of the lens; and that the lens shape remains constant because two objects features, e.g., width and height, are manipulated to change the size of the object and NOT the shape."

The Applicant respectfully submits that Robertson does to actually teach what the Examiner says it does. Please consider the following points:

1. The shape of the lens panel ("Detail") in FIG. 5(b) of Robertson is different from the shape of the lens panel **520** in FIG. 9 which is different again from the shape of the lens panel in FIG. 8. Each lens panel here has a different aspect ratio (i.e., ratio of width to height). Robertson does not specifically teach maintaining aspect ratio. In fact, FIGS. 5(b), 8, and 9 show that aspect ratio is not kept constant in Robertson.

2. The only way that changing both the width and height of a square will result in an enlarged square is if both the width and height are changed proportionately. That is, if the aspect ratio (i.e., the ratio of width to height) is maintained. For a square, this means that the width and height would have be changed by the same amount.

3. Col. 7, lines 31-41 of Robertson recites the following: "Typically, the viewer of display **102** will manipulate mouse **108** with mouse button **109** pressed to modify the values of lens_x and lens_y, will manipulate mouse **108** with mouse button **109** pressed while the mouse is pointed at an edge of the lens panel to modify the values of lens_width and lens_height, and will use the Alt key **120** of keyboard **110** to increase lens_z and the space bar **122** of the keyboard **110** to decrease lens_z. Of course, for more natural movement, more that one value

of lens_x, lens_y, lens_z, lens_width and lens_height may be modified for a given mouse command."

And at col. 8, lines 59-63, Robertson recites: "At block 308, CPU 130 recalculates the lens position and size. As explained above, the position adjustments modify the values of lens_x, lens_y, and lens_z, while size adjustments modify the values of lens_width and lens_height."

These selections indicate that the width and height of the lens panel in Robertson are adjusted independently. That means that aspect ratio is not necessarily maintained. Note the following from the second selection: "... size adjustments modify the values of lens_width and lens_height...". The expression "size adjustments" means that more than one adjustment is anticipated. Note the following from the first selection: "...the mouse is pointed at an edge of the lens panel to modify the values of lens_width and lens_height...". When adjusting a rectangle with any common drawing tool (e.g., Word, Paint, etc.) pulling on an edge of the rectangle always modifies the aspect ratio of the rectangle. In common drawing tools, pulling on the corner of a rectangle is generally used to maintain aspect ratio.

Therefore, the Applicant respectfully submits that Robertson does not teach a constant lens shape. In fact, it teaches the opposite.

With respect to the "Claims Rejections" section of the Office Action beginning on page 2 of the Office Action, please consider the following.

As recited in Claim 1, the Applicant's invention is directed toward a method for displaying a region of interest while transitioning between first and second locations for the region of interest within visual information on a display screen of a computer, comprising:

applying a transformation to a border region of the region of interest in the visual information to improve visual detail in the border region of the region of interest by: creating a lens surface for the border region having a lens surface shape; and, creating a presentation by overlaying the visual information on the lens surface and projecting the lens surface with the visual information onto a plane in a uniform direction aligned with a viewpoint, wherein at least one of the lens surface shape and the viewpoint remain constant during the transitioning between the first and second locations ; and,

displaying the presentation on the display screen.

With respect to Claim 1, on pages 2-3 of the Office Action the Examiner states that FIGS. 4 and 8 of Robertson disclose that element of Claim 1 that recites "applying a transformation to a border region of the region of interest in the visual information". The Applicant respectfully disagrees. FIGS. 4 and 8 of Robertson do not show the application of a transformation to a border region of the region of interest (as claimed by the Applicant), rather, they show the application of a transformation to the entire region of interest.

Still with respect to Claim 1, on page 3 of the Office Action the Examiner states that Robertson discloses "a predetermined lens surface shape (i.e. the lens is shaped/sized according to user specification) (Fig. 4; col. 8, ll. 15-21; col. 11, ll. 14-16)". However, the term "predetermined" does not appear in the Applicant's claim. Therefore, the application of Robertson in this respect is unwarranted.

Still with respect to Claim 1, on page 3 of the Office Action the Examiner states that Robertson discloses "and creating a presentation by overlaying the visual information on the lens surface (Fig. 9 "510 & 520")". However, FIG. 9 of Robertson does not show a lens surface. Rather, FIG. 9 of Robertson shows, as stated in Col. 5, lines 10-13, "...a line diagram of a specific embodiment of the present invention wherein an nested image lens is used on the image provided in the image lens panel of a nesting image lens." In particular, items "510" and "520" in FIG. 9 of Robertson are a "lens panel" and a "nested image lens", respectively (see col. 11, lines 5-11).

Still with respect to Claim 1, on page 3 of the Office Action the Examiner states that Robertson discloses "and projecting the lens surface with the visual information onto a plane (Fig. 9 "500")". However, FIG. 9 of Robertson does not show a projection plane. In particular, item "500" in FIG. 9 of Robertson is a "border" of the entire image (see col. 11, lines 5-11).

Still with respect to Claim 1, on page 3 of the Office Action the Examiner states that Robertson discloses "in a uniform direction aligned with a viewpoint (col. 5, ll. 40-47)". However, col. 5, lines 40-47, of Robertson does not disclose this. Rather, col. 5, lines 40-47, of Robertson states the following: "FIG. 3 also shows interface **140** (display output), interface **142** (mouse input), and interface 144 (keyboard input)....When display system **100** is operational, CPU **130** retrieves a full

image from image storage 132. The retrieved image is either an image of objects mapped onto a 2D surface, such as pixels of various colors, or the retrieved image is a logical representation of an image to appear on the 2D surface, such as text characters in a document with an indication of the font and position in which the characters are to appear." The words "uniform" or "direction" do not even appear in this selection.

Still with respect to Claim 1, on page 3 of the Office Action the Examiner states that Robertson discloses "wherein at least one of the lens surface shape and the viewpoint remain constant during the transitioning between the first and second locations (col. 4, ll. 25-30; col. 8-9, ll. 63-7)". For reference, col. 4, ll. 25-30 states the following:

> "The viewpoint is a point above the truncated top of the pyramid, but in some embodiments, **the viewpoint moves around based on the movement of the image lens in order to keep the lensed panel in view**."

Now, please refer to Figure 1 above. As shown in Figure, the viewpoint v1 "moves around" when the lens is moved. That it, the viewpoint v1 moves to location v2 when the lens moves from location x1 to location x2. This is a teaching away from the Applicant's invention. Again, in the Applicant's invention as claimed in Claim 1, the viewpoint v remains constant when the lens moves from location x1 to location x2.

With respect to col. 8-9, lines 63-67 of Robertson, that selection states:

> "At block 309, the viewpoint is adjusted if necessary. As can be seen from FIG. 4(b), if lens panel 212 is positioned high enough and far enough to one side, it will move outside the pyramid defined by viewpoint V and the base image 200, in which case the lens panel will not be visible. To avoid this situation, in some embodiments, **the viewpoint moves with the lens**. CPU 130 generates this effect by coupling the values of eye_ x and eye_y to lens_center_x and lens_center_y, so that the lens panel tends to remain visible. The position of the viewpoint affects what the user sees since, as explained above, the viewpoint is used in the calculation of the perspective transform."

Please refer again to Figure 1 above. As shown in Figure, the viewpoint v1 "moves with the lens" when the lens is moved. That it, the viewpoint v1 moves to location v2 when the lens moves from

location x1 to location x2. Again, this is a teaching away from the Applicant's invention. In the Applicant's invention, as claimed in Claim 1, the viewpoint v remains constant when the lens moves from location x1 to location x2.

Finally, with respect to Claim 1, on page 3 of the Office Action the Examiner states that Robertson discloses "displaying the presentation on the display screen (Fig. 2)." However, FIG. 2 of Robertson does not disclose a displaying step. Rather, FIG. 2 of Robertson shows a computer system with a display screen.

Therefore, Robertson does not disclose the subject matter of Claim 1.

With respect to Claim 2, on page 3 of the Office Action the Examiner states: "As per dependent claim 2, Robertson discloses the transformation transforms only a portion of the visual information in the region of interest (col. 3, ll. 45-47; Fig. 4)." For reference, col. 3, lines 43-47, states the following:

> "In one embodiment of the present invention, a full image is presented as a lensed panel detail image and side panel images. The lensed panel contains a view of a portion (possibly all) of the full image to a desired resolution, surrounded by side panel images which show global context and are continuous with the lensed panel and adjacent side panel images."

Thus, in Robertson the transformation is applied to the visual information in both the lensed panel and side panel images. In other words, the transformation is applied to all of the image. This selection does not disclose the transformation being applied to only a portion of the lensed panel or side panel images. Therefore, this selection from Robertson does not disclose "the transformation transforms only a portion of the visual information in the region of interest" as claimed in Claim 2.

With respect to Claim 3, on page 3 of the Office Action the Examiner states: "As per dependent claim 3, Robertson discloses the portion is a border of the region of interest (i.e. thick border region surrounding the region of interest) (Fig. 8)." However, the "thick border region" in FIG. 8 of Robertson does not show a transformation of the visual information in that region. For, example, no transformed text is shown in this region. It is simply a thick black line surrounding the lensed panel. Therefore, Robertson does not disclose "the portion is the border of the region of interest" as claimed in Claim 3.

With respect to Claim 4, on page 3 of the Office Action the Examiner states: "As per dependent claims 4, Robertson discloses the border region is a periphery of said transitional region of interest (i.e. columns adjacent the region of interest are peripheral to the region) (Fig.8)." However, the term "transitional" does not appear in the Applicant's claim. Therefore, the application of Robertson in this respect is unwarranted.

With respect to Claim 5, on page 4 of the Office Action the Examiner states: "As per dependent claim 5, Robertson discloses the lens surface for the border region is defined by a distortion function (i.e. the surface of the border region is transformed/distorted in varying degrees of detail) (col. 8, ll. 17-21)." For reference, col. 8, lines 14-25, states the following:

> "At block **303**, CPU 130 calculates the transforms of each of the panels and renders the transformed image onto the display. Because the display is a 2D perspective of a 3D truncated pyramid onto which the image is placed, the lens panel will show a portion of the full image in detail, and the side panels will show the remainder of the image in varying degrees of detail, with more detail closer to the lens panel, and the side panels will also show global context...To perform transformation and rendering efficiently, every point of the image is not transformed, but instead only the vertices and an identity matrix are transformed."

Thus, in Robertson only "vertices" are transformed. The Applicant submits that vertices or points are not equivalent to a distortion function. Therefore, Robertson does not disclose "the lens surface for the border region is defined by a distortion function" as claimed in Claim 5.

With respect to Claim 6, on page 4 of the Office Action the Examiner states: "As per dependent claim 6, Robertson discloses the lens surface for the border region is defined by a predetermined portion of a lens surface for rendering the region of interest (i.e. the lens shape, e.g. length and/or width, is determined by the region of interest and the lens position relative to the distance of other image planes) (col. 6, ll. 35-50; col. 7, ll. 31-41)." For reference, col. 6, lines 35-50, states the following:

> "The parameters of the transformations are derived from a description of viewpoint V, the boundaries of full image **200** (which are also the edges of the base of truncated pyramid **203**

in most cases), the boundaries of image lens **212** and the relative distances between full image **200** at the base of truncated pyramid **203**, image lens **212**, view plane **214**, and viewpoint V. These parameters can be adjusted by a user to have the visual effects of moving the image lens in and out (zoom) and moving the image lens over full image **200** (pan). In some embodiments, the position of viewpoint V is modified by the user or is automatically modified so as to keep the projection of image lens **212** within the bounds of viewing plane **214**. In FIG. 4(b), the projection of truncated pyramid **203** occupies all of viewing surface **214**, so as to efficiently use display surface **104**, however parameters might be provided so that view plane **214** and/or viewpoint V are movable such that this is not the case."

With respect to col. 7, lines 31-41, of Robertson, that selection states:

> "Typically, the viewer of display **102** will manipulate mouse **108** with mouse button **109** pressed to modify the values of lens_x and lens_y, will manipulate mouse **108** with mouse button **109** pressed while the mouse is pointed at an edge of the lens panel to modify the values of lens_ width and lens_height, and will use the Alt key **120** of keyboard **110** to increase lens_z and the space bar **122** of keyboard **110** to decrease lens_z. Of course, for more natural movement, more than one value of lens_x, lens_y, lens_z, lens_width and lens_height may be modified for a given mouse command."

As these selections illustrate, in Robertson the transformation is applied to the visual information in both the lensed panel and side panel images. In other words, the transformation is applied to all of the image. These selections do not disclose the transformation being applied to only a portion of the lensed panel or side panel images. Therefore, these selections from Robertson do not disclose "the lens surface for the border region is defined by a predetermined portion of a lens surface for rendering the region of interest" as claimed in Claim 6.

With respect to Claim 7, on page 4 of the Office Action the Examiner states: "As per dependent claim 7, Robertson discloses the predetermined portion is a border region of the lens surface for rendering the region of interest (i.e. side panels are adjacent the center region of interest and are used to render the image using the desired focus of the user) (Fig. 9; col. 8, ll. 22-25)." For reference, col. 8, lines 22-25, states the following: "To perform transformation and rendering efficiently, every

point of the image is not transformed, but instead only the vertices and an identity matrix are transformed". Thus, in Robertson only "vertices" are transformed. The Applicant submits that vertices or points are not equivalent to a portion of a boarder region of a lens surface. Therefore, Robertson does not disclose "the predetermined portion is a border region of the lens surface for rendering the region of interest" as claimed in Claim 7.

With respect to Claim 8, on page 4 of the Office Action the Examiner states: "As per dependent claim 8, Robertson discloses the predetermined portion is a periphery of the lens surface for rendering the region of interest (i.e. columns adjacent the region of interest are peripheral to the region) (Fig. 8; col. 8, ll. 22-25)." For reference, col. 8, lines 22-25, states the following: "To perform transformation and rendering efficiently, every point of the image is not transformed, but instead only the vertices and an identity matrix are transformed". Thus, in Robertson only "vertices" are transformed. The Applicant submits that vertices or points are not equivalent to a portion of a the lens surface, the portion being a periphery of the lens surface. Therefore, Robertson does not disclose "the predetermined portion is a periphery of the lens surface for rendering the region of interest" as claimed in Claim 8.

With respect to Claim 10, on page 4 of the Office Action the Examiner states: "As per dependent claim 10, Robertson discloses establishing a path between the first and second locations for the region of interest (i.e. the movement of the lens over the image) (col. 6, ll. 40-45)." For reference, col. 6, lines 35-51, states the following:

> "The parameters of the transformations are derived from a description of viewpoint V, the boundaries of full image **200** (which are also the edges of the base of truncated pyramid **203** in most cases), the boundaries of image lens **212** and the relative distances between full image **200** at the base of truncated pyramid **203**, image lens **212**, view plane **214**, and viewpoint V. These parameters can be adjusted by a user to have the visual effects of moving the image lens in and out (zoom) and moving the image lens over full image **200** (pan). In some embodiments, the position of viewpoint V is modified by the user or is automatically modified so as to keep the projection of image lens **212** within the bounds of viewing plane **214**. In FIG. 4(b), the projection of truncated pyramid **203** occupies all of viewing surface **214**, so as to efficiently use display surface **104**, however parameters might

be provided so that view plane **214** and/or viewpoint V are movable such that this is not the case."

The Applicant respectfully submits that this selection has nothing to do with establishing a path between first and second locations for the region of interest. The word "path" does not even appear in this selection. In addition, this selection mainly pertains to the movement of the viewpoint in Robertson (see Figure 1 above). As explained above with reference to Figure 2, the viewpoint remains constant and does not move according to the Applicant's invention. What moves in the Applicant's invention is the location of the region of interest to which a lens is applied. That is what Claim 10 pertains to. Therefore, Robertson does not disclose "establishing a path between the first and second locations for the region of interest" as claimed in Claim 10.

With respect to Claim 11, on page 5 of the Office Action the Examiner states: "As per dependent claim 11, Robertson discloses the path is established automatically by a predetermined program (i.e. the viewplane which is used to project the lens is controlled by the user or automatically by the stored program to alter the position of the plane) (col. 6, ll. 44-59)." For reference, col. 6, lines 44-59, states the following:

> "In some embodiments, the position of viewpoint V is modified by the user or is automatically modified so as to keep the projection of image lens **212** within the bounds of viewing plane **214**. In FIG. 4(b), the projection of truncated pyramid **203** occupies all of viewing surface **214**, so as to efficiently use display surface **104**, however parameters might be provided so that view plane **214** and/or viewpoint V are movable such that this is not the case...FIGS. 5(a)-(b) and the flowcharts of FIGS. 6-7 describe the operation of a specific embodiment of display system **100** according to the present invention. FIGS. 5(a)-(b) are mappings of an original full image **250** and a transformed, or "lensed", image **252**. The flowcharts in FIGS. 6-7 describe the instructions which are stored in program storage **136** and are used by CPU **130** to effect the transformation of image **250** into image **252**."

Again, this selection from Robertson pertains to the movement of the viewpoint (see Figure 1 above). As explained above with reference to Figure 2, the viewpoint remains constant and does not move according to the Applicant's invention. Therefore, Robertson does not disclose "the path is established automatically by a predetermined program" as claimed in Claim 11.

With respect to Claim 12, on page 5 of the Office Action the Examiner states: "As per dependent claim 12, Robertson discloses the path is established by user selection (i.e. the viewplane which is used to project the lens is controlled by the user or automatically by the stored program to alter the position of the plane) (col. 6, ll. 44-59)." The selection from Robertson cited by the Examiner is the same one cited with respect to Claim 11. Once again, this selection from Robertson pertains to the movement of the viewpoint (see Figure 1 above). As explained above with reference to Figure 2, the viewpoint remains constant and does not move according to the Applicant's invention. Therefore, Robertson does not disclose "the path is established by user selection" as claimed in Claim 12.

With respect to Claim 13, on page 5 of the Office Action the Examiner states: "As per dependent claim 13, Robertson discloses increasing resolution of the visual information in the region of interest (Fig. 8); and decreasing resolution of the visual information outside the region of interest (i.e. image portions adjacent the region of interest are displayed in varied degrees of detail)(col. 8, ll. 15-21)." For reference, col. 8, lines 15-21, states the following:

> "At block **303**, CPU **130** calculates the transforms of each of the panels and renders the transformed image onto the display. Because the display is a 2D perspective of a 3D truncated pyramid onto which the image is placed, the lens panel will show a portion of the full image in detail, and the side panels will show the remainder of the image in varying degrees of detail, with more detail closer to the lens panel, and the side panels will also show global context."

The Applicant respectfully submits that this selection has nothing to do with increasing and/or decreasing resolution. The word "resolution" does not even appear in this selection. What this selection refers to is varying magnification due to projection of a 3D truncated pyramid onto a 2D display. Resolution and magnification are two different things. In general, resolution pertains to the amount of information (e.g., pixels) in an image while magnification pertains to the size of the image. One can increase magnification without increasing resolution. Therefore, Robertson does not disclose "increasing resolution of the visual information in the region of interest; and, decreasing resolution of the visual information outside the region of interest" as claimed in Claim 13.

With respect to Claim 14, on page 5 of the Office Action the Examiner states: "As per dependent claim 14, Robertson discloses the transformation provides a smooth transition to the region of interest from an adjacent region (col. 6, ll. 40-45; col. 7, ll. 43-45), by blending increased and said decreased resolution visual information in predefined regions adjacent to the region of interest (col. 8, ll. 15-21)." For reference, col. 6, lines 35-51, states the following:

> "The parameters of the transformations are derived from a description of viewpoint V, the boundaries of full image **200** (which are also the edges of the base of truncated pyramid **203** in most cases), the boundaries of image lens **212** and the relative distances between full image **200** at the base of truncated pyramid **203**, image lens **212**, view plane **214**, and viewpoint V. These parameters can be adjusted by a user to have the visual effects of moving the image lens in and out (zoom) and moving the image lens over full image **200** (pan). In some embodiments, the position of viewpoint V is modified by the user or is automatically modified so as to keep the projection of image lens **212** within the bounds of viewing plane **214**. In FIG. 4(b), the projection of truncated pyramid **203** occupies all of viewing surface **214**, so as to efficiently use display surface **104**, however parameters might be provided so that view plane **214** and/or viewpoint V are movable such that this is not the case."

For reference, col. 7, lines 43-45, states the following:

> "To provide smooth movement when the lens is pulled in and out, a logarithmic approach function is used rather than moving the lens a fixed distance in the z direction for each press of a key on keyboard **110**."

For reference, col. 8, lines 15-21, states the following:

> "At block **303**, CPU **130** calculates the transforms of each of the panels and renders the transformed image onto the display. Because the display is a 2D perspective of a 3D truncated pyramid onto which the image is placed, the lens panel will show a portion of the full image in detail, and the side panels will show the remainder of the image in varying

degrees of detail, with more detail closer to the lens panel, and the side panels will also show global context."

Column 6, lines 35-51, pertains to movement of the viewpoint in Robertson and is not relevant with respect to Claim 14 which is not directed to any form of movement. Column 7, lines 43-45, pertains to magnification of the Robertson lens. The term "smooth" relates to transitioning between magnification levels by adjustment of lens height which is not relevant with respect to Claim 14 which is not directed to transitioning between magnification levels. And, col. 8, lines 15-21 pertains to magnification variation due to projection of a 3D truncated pyramid onto a 2D display which is not relevant with respect to Claim 14 which is not directed to magnification per se. None of these selections from Robertson relate to blending of information to provide smooth transitioning. In fact, none of these selections even mention the word "blend". Therefore, Robertson does not disclose "the transformation provides a smooth transition to the region of interest from an adjacent region by blending increased and decreased resolution visual information in predefined regions adjacent to the region of interest" as claimed in Claim 14.

With respect to Claim 15, on page 6 of the Office Action the Examiner states: "As per dependent claim 15, Robertson discloses the blending is performed by averaging the increased and said decreased resolution visual information (i.e. displaying the adjacent regions next to the region of interest by varying the level of detail of the resolution of each to create a smooth/averaged display transformation)(col. 10, ll. 10-16, 33-38)". For reference, col. 10, lines 10-16 and lines 33-38, states the following:

> "The 3D transform for a side panel of the image is a rotation about the side panel edge which forms an edge of the full image, followed by a scaling of the side panel towards the lens panel, so that the side panel meets the lens panel. After the 3D transform, the 3D perspective transform is done, however all these transforms might be done by a mere matrix multiplication... After rotation and expansion, the side panels 'meet' the lens panel in the 3D space, so the 3D perspective transform of the side panels, when added to the transform of the lens panel show the entire image, although with varying levels of detail. Since the entire image is shown, context is preserved."

The Applicant respectfully submits that this selection has nothing to do with averaging visual information having different resolution. The words "blending", "average" and "resolution" do not even appear in this selection. What this selection refers to manipulating top and side panels to form a truncated pyramid. Therefore, Robertson does not disclose "the blending is performed by averaging the increased and decreased resolution visual information" as claimed in Claim 15.

With respect to Claim 16, on page 6 of the Office Action the Examiner states: "As per dependent claim 16, Robertson discloses the blending is performed by admixing said increased and the decreased resolution visual information (i.e. displaying the region of interest in one font and the adjacent region in another font, such that the fonts are mixed to provide the appearance of motion of the lens) (col. 8, ll. 50-61)." For reference, col. 8, lines 50-61, states the following:

> "Once the second frame buffer is completed, the two frame buffers are swapped at block **305** before CPU **130** returns to block **302**...At block **306**, CPU **130** exits the program if some predetermined exit condition is met, otherwise it proceeds to block **307**. At block **307**, CPU **130** checks for a lens movement command, and in embodiments where it is allowed, checks for a viewpoint movement command. If a movement command has not been entered, CPU **130** moves back to block **306**, otherwise it proceeds to block **308**...At block **308**, CPU **130** recalculates the lens position and size. As explained above, the position adjustments modify the values of lens_x, lens_y, and lens_ z, while size adjustments modify the values of lens_width and lens_height."

The Applicant respectfully submits that this selection has nothing to do with admixing visual information having different resolution. The words "blending", "admixing", and "resolution" do not even appear in this selection. Claim 16 is simply not directed toward lens movement. Therefore, Robertson does not disclose "the blending is performed by admixing the increased and decreased resolution visual information" as claimed in Claim 16.

With respect to Claim 17, on page 6 of the Office Action the Examiner states: "As per dependent claim 17, Robertson discloses transmitting the presentation over a network to a remote computer (col. 2, ll. 6-19)." For reference, col. 8, lines 6-19, states the following:

> "A display device or display system, as used herein, could be a computer monitor, printer, or the like, however computer monitors are more suitable for interactive displays of images. Where image processing is required, a display system will often include an image processor or other computer system. A display device might also be a device which behaves as if it displayed images but does not actually display the images. For example, a facsimile machine might manipulate images much the same manner as a computer display, but doesn't necessarily display an image, instead providing the image to another system which does display the provided image."

The Applicant respectfully submits that this selection has nothing to do with transmitting a presentation over a network to a remote computer. The words "transmit", "remote", and "network" do not even appear in this selection. This selection simply describes different display types. Therefore, Robertson does not disclose "transmitting the presentation over a network to a remote computer" as claimed in Claim 16.

With respect to Claim 19, on page 6 of the Office Action the Examiner states: "As per dependent claim 19, Robertson discloses the lens surface for rendering the region of interest is defined by a distortion function (i.e. the surface of the border region is transformed/distorted in varying degrees of detail)(col. 8, ll. 17-21)." For reference, col. 8, lines 15-25, states the following:

> "At block **303**, CPU **130** calculates the transforms of each of the panels and renders the transformed image onto the display. Because the display is a 2D perspective of a 3D truncated pyramid onto which the image is placed, the lens panel will show a portion of the full image in detail, and the side panels will show the remainder of the image in varying degrees of detail, with more detail closer to the lens panel, and the side panels will also show global context....To perform transformation and rendering efficiently, every point of the image is not transformed, but instead only the vertices and an identity matrix are transformed".

Thus, in Robertson only "vertices" are transformed. The Applicant submits that vertices or points are not equivalent to a distortion function. Therefore, Robertson does not disclose "the lens surface for rendering the region of interest is defined by the distortion function" as claimed in Claim 19.

With respect to Claim 20, on pages 6-7 of the Office Action the Examiner states: "As per dependent claim 20, Robertson discloses the region of interest, the lens surface, and the lens surface shape include a plurality of regions of interest, a plurality of lens surfaces, and a plurality of lens surface shapes, respectivcly (i.e., nested lens within a lensed image)(Fig. 9)". However, FIG. 9 does not disclose a plurality of regions of interest, a plurality of lens surfaces, and a plurality of lens surface shapes. The nested lens of FIG. 9 is in fact a single lens. FIG. 9 shows ones lens panel **520** with eight side panels **502, 504, 506, 508, 512, 514, 516, 518**. Being one lens, it can only be applied to one region of interest. Therefore, Robertson does not disclose "the region of interest, the lens surface, and the lens surface shape include a plurality of regions of interest, a plurality of lens surfaces, and a plurality of lens surface shapes, respectively" as claimed in Claim 20.

With respect to Claim 32, on page 7 of the Office Action the Examiner states: "As per independent claim 32, Robertson discloses a method in a computer system (Fig. 2). The rationale as applied in the rejection of Claim 1 applies herein." For the reasons given above with respect to Claim 1, the Examiner's rejection is traversed.

With respect to Claim 33, on page 7 of the Office Action the Examiner states: "As per dependent claim 33, the rationale as applied in the rejection of claim 1 applies herein." For the reasons given above with respect to Claim 1, the Examiner's rejection is traversed.

With respect to Claim 34, on page 7 of the Office Action the Examiner states: "As per dependent claim 34, the rationale as applied in the rejection of claim 13 applies herein." For the reasons given above with respect to Claim 13, the Examiner's rejection is traversed.

With respect to Claim 35, on page 7 of the Office Action the Examiner states: "As per dependent claim 35, the rationale as applied in the rejection of claim 13 applies herein." For the reasons given above with respect to Claim 13, the Examiner's rejection is traversed.

With respect to Claim 18, on page 10 of the Office Action the Examiner states: "As per dependent claim 18, Robertson teaches retrieving and transmitting a text document for display (Fig. 8; col. 2, ll. 6-19)...Robertson fails to specifically disclose the visual information includes a portable document

format (PDF) document, which Tognazinni discloses (col. 8, ll. 4-10; col. 11, ll. 7-16)...It would have been obvious to one of skill in the art to have the visual information of Robertson include a portable document format (PDF), as Tognazini teaches, because a text document that is transmitted between display systems is formatted such that the document is portable." For reference, col. 8, lines 4-10 and col. 11, lines 7-16 of Tognazinni state the following:

> "Image - Any information displayed on a display screen such as, but not limited to, pictures, drawings, illustrations, text, and video. An image generally displayed in a view contained in a window. A still image is a picture. A moving image is comprised of a number of frames of still images that are played in sequence similar to a video. [col. 8, lines 4-10]... FIG. 5 illustrates how a preferred embodiment of the invention is used in a WWW browser. The browser application displays a window **501** on the display device. The user invokes a URL to present a webpage containing information encoded in HTML in the window **501**. In this particular example, the webpage shows a plurality of three areas of text **503**, **511** and **517** along with a plurality of areas of images **505**, **513** and **519**. [col. 11, lines 7-16]"

The Applicant respectfully submits that this selection has nothing to do with PDF formatted images. The expressions "PDF" or "portable display format" do not even appear in this selection. Therefore, Tognazinni does not disclose "the visual information includes a portable document format (PDF) document" as claimed in Claim 18. Therefore, Claim 18 is not obvious given Robertson and Tognazinni.

With respect to Claim 22, on page 10 of the Office Action the Examiner states: "As per dependent claim 22, Robertson teaches modifying the resolution, e.g. magnification, of a portion of a viewed image as selected by a user...Robertson fails to specifically disclose the visual information includes web page content, which Tognazzini discloses (col. 8, ll. 25-30)...It would have been obvious to one of skill in the art to have the visual information of Robertson include web page content, as Tognazzini teaches, because retrieving visual information suggests that the displayable visual information is transmitted form one system to another, just as web page content is transmitted between systems." For reference, col. 8, lines 25-30 of Tognazinni states the following:

"URL - A Uniform Resource Locator. URLs are used to access information on the World Wide Web...View - An area in a window where information is provided."

The Applicant respectfully submits that this selection has nothing to do with web page content. The expressions "web page" or "web page content" do not even appear in this selection. This selection simply defines the terms "URL" and "View". Therefore, Tognazinni does not disclose "the visual information includes web page content" as claimed in Claim 22. Therefore, Claim 22 is not obvious given Robertson and Tognazinni.

With respect to Claim 26, on page 11 of the Office Action the Examiner states: "As per dependent claim 26, Robertson teaches selecting visual information that is any of a text document, a map or graph (col. 1, ll. 29-30), where text documents include selectable scalable content (Fig. 4)...Robertson fails to specifically disclose the region of interest includes a headline, a column, an article, a graphic, and an advertisement, which Tognazzini discloses (col. 5, ll. 15-20; Figs. 8 & 16)...It would have been obvious to one of skill in the art to have the visual information of Robertson include a plurality of headlines, columns, articles, graphics, and advertisements, as taught by Tognazzini, because a text, map or graph document include content which is any of plurality of headlines, columns, articles, graphics, and advertisements that are used to relay information visually." For reference, col. 5, lines 15-20 of Tognazinni states the following:

"Problems with Selecting Relevant Information for a User...Another aspect of electronic newspapers, briefly mentioned above, is that of selecting information content for the newspaper. Information content includes both articles about particular items of interest and advertising information."

This cited passage from Tognazinni does not disclosed a selected region of interest. Therefore, col. 5, lines 15-20 of Tognazinni does not disclose that element of Claim 26 that recites "the region of interest includes a headline, a column, an article, a graphic, and an advertisement".

With respect to FIG. 8 of Tognazinni, that figure illustrates "a window **801** displaying an example page **803**. The page **803** includes text and an image **805** of a phone. The phone image **805** has an

associated textual caption **807**" (see col. 13, lines 18-21). FIG. 8 does not disclose a selected region of interest. Therefore, FIG. 8 does note disclose that element of Claim 26 that recites "the region of interest includes a headline, a column, an article, a graphic, and an advertisement".

With respect to FIG. 16 of Tognazinni, that figure illustrates "a possible second page of information. Again, the information is provided within views contained in a window **1601**. Now a plurality of articles **1607, 1611, 1615** and **1619** are all scientific or technology based, but with different levels of difficulty extending from articles of interest to the lay reader to those that are directed toward the advanced elemental particle physicist. Further, both a Major Scientific Headline **1603** and an advertising **1621** can be selected to be of interest to the user. This allows the information provider to narrowly target advertising and articles to each user. Again the information provider can continue to refine and narrow the selection of information presented to the user on subsequent pages depending on the interest shown in a plurality of article titles **1605, 1609, 1613, 1617**, the time spent with reading each article **1607, 1611, 1615** and **1619** and the time spent looking at the advertisement **1621** of the current page" (see col. 16, lines 29-45). FIG. 16 does not disclose a selected region of interest. Therefore, FIG. 16 does note disclose that element of Claim 26 that recites "the region of interest includes a headline, a column, an article, a graphic, and an advertisement".

Therefore, none of col. 5, lines 15-20, FIG. 8, and FIG. 16 of Tognazinni specifically disclose "the region of interest includes a headline, a column, an article, a graphic, and an advertisement" as claimed in Claim 26. Therefore, Claim 26 is not obvious given Robertson and Tognazinni.

Furthermore, the Examiner has cited no teachings in Robertson that would have suggested, to one of ordinary skill in the art, the desirability of a combination with Tognazinni. Rather, the Examiner has merely stated "...because a text, map or graph document include content which is any of plurality of headlines, columns, articles, graphics, and advertisements that are used to relay information visually." Hence, the required motivation for combining Robertson and Tognazinni has not been established by the Examiner.

The Examiner is respectfully reminded that the standard for obviousness is not whether the prior art *could* have been modified to achieve the invention (this is substantially always the case), rather, the

standard is whether the prior art provides *motivation* for one of ordinary skill in the art to make the claimed invention. Recall the following selection from *In re Laskowski*, 871 F.2d 115, 117 (Fed. Cir. 1989), citing *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984): "Although the Commissioner suggests that Hoffman could readily be modified to form the Laskowski structure, '[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.'"

With respect to Claim 27, on page 12 of the Office Action the Examiner states: "As per dependent claim 27, Robertson discloses said lens surface shape has a shape corresponding to that of the region of interest (Fig. 8; col. 6, ll. 54-56)." For reference, col. 5, lines 15-20 states the following:

> "FIGS. 5(a)-(b) are mappings of an original full image **250** and a transformed, or 'lensed', image **252**."

The Applicant respectfully submits that this selection has nothing to do with the shaping of the lens to the region of interest. The word "shape" does not even appear in this selection. Therefore, this selection from Robertson does not disclose "the lens surface shape has a shape corresponding to that of the region of interest" as claimed in Claim 27.

With respect to FIG. 8 of Robertson, that figure shows a portion of page surrounded by a dark border, the page being a part of a multi-page document. The portion of the page (to the right and under the dark border) is not within the lens panel. If the page is the region of interest, the lens panel has not been shaped to fit the page. Therefore, FIG. 8 of Robertson does not disclose "the lens surface shape has a shape corresponding to that of the region of interest" as claimed in Claim 27.

With respect to Claim 28, on page 12 of the Office Action the Examiner states: "As per dependent claim 28, Robertson discloses said lens surface shape has a shape corresponding to a column (Fig. 8)." With respect to FIG. 8 of Robertson, that figure shows a portion of page surrounded by a dark border, the page being a part of a multi-page document. None of the pages shown in FIG. 8 are divided into columns. Therefore, FIG. 8 of Robertson does not disclose "the lens surface shape has a shape corresponding to a column" as claimed in Claim 28.

With respect to Claim 29, on page 12 of the Office Action the Examiner states: "As per dependent claim 29, Robertson discloses the transformation increases the font size within portion of the column (i.e. the lens shows the image portion of the document in detail)(Fig. 8)." With respect to FIG. 8 of Robertson, that figure shows a portion of page surrounded by a dark border, the page being a part of a multi-page document. The text shown in the lens panel is all of the same sized font. In addition, none of the pages shown in FIG. 8 are divided into columns. Therefore, FIG. 8 of Robertson does not disclose "the transformation increases the font size within a portion of the column" as claimed in Claim 29.

With respect to Claim 30, on page 12 of the Office Action the Examiner states: "As per dependent claim 30, Robertson discloses said lens surface shape is tapered to provide a continuous transition on at least on side of the portion of the column to undistorted text (Fig. 8; col. 8, ll. 17-21)". For reference, col. 8, lines 15-21 states the following:

> "At block 303, CPU 130 calculates the transforms of each of the panels and renders the transformed image onto the display. Because the display is a 2D perspective of a 3D truncated pyramid onto which the image is placed, the lens panel will show a portion of the full image in detail, and the side panels will show the remainder of the image in varying degrees of detail, with more detail closer to the lens panel, and the side panels will also show global context."

The Applicant respectfully submits that this selection has nothing to do with the shaping of the lens to provide tapering for a column. The words "shape" or "column" do not even appear in this selection. Therefore, this selection from Robertson does not disclose "the lens surface shape is tapered to provide a continuous transition on at least one side of the portion of the column to undistorted text" as claimed in Claim 30.

With respect to FIG. 8 of Robertson, that figure shows a portion of page surrounded by a dark border, the page being a part of a multi-page document. None of the pages shown in FIG. 8 are divided into columns. Therefore, FIG. 8 of Robertson does not disclose "the lens surface shape is

tapered to provide a continuous transition on at least one side of the portion of the column to undistorted text" as claimed in Claim 30.

With respect to Claim 31, on page 12 of the Office Action the Examiner states: "As per independent claim 31, Robertson discloses a method as claimed in claim 18. Therefore the rationale applied in the rejection of claim 18 applies herein." Please note that Claim 31 is a dependent claim depending from Claim 18, rather than an independent claim. The Examiner has not cited any prior art against Claim 31. Hence, the Examiner's rejection is traversed.

To conclude, the Applicant believes that Claim 1 is clearly patentable over Robertson as this reference does not teach or suggest the subject matter of Claim 1. In particular, Robertson does not teach or suggest those elements of Claim 1 that recite "applying a transformation to a border region of the region of interest in the visual information to improve visual detail in the border region of the region of interest by: creating a lens surface for the border region having a lens surface shape; and, creating a presentation by overlaying the visual information on the lens surface and projecting the lens surface with the visual information onto a plane in a uniform direction aligned with a viewpoint, wherein at least one of the lens surface shape and the viewpoint remain constant during the transitioning between the first and second locations." In addition, the Applicant believes that Claims 2-8 and 10-31, being dependent on Claim 1 and adding patentable features thereto, are also patentable over the Robertson and Tognazzini references.

In addition, the Applicant believes that Claim 32 is clearly patentable over Robertson as this reference does not teach or suggest the subject matter of Claim 32. In particular, Robertson does not teach or suggest those elements of new Claims 32 that recite "applying a lens to a border region of the region of interest in the original image by displacing the border region onto the lens and projecting the displacing onto a plane in a uniform direction aligned with a viewpoint, wherein at least one of the lens and the viewpoint remain constant while transitioning between first and second locations for the region of interest in the original image". In addition, the Applicant believes that Claims 33-35, being dependent on Claim 32 and adding patentable features thereto, are also patentable over the Robertson and Tognazzini references.

Given the above, the Applicant respectfully submits that the Examiner wrongly made the Office Action of September 1, 2005 "Final". The Applicant believes that the Examiner misapplied Robertson. Also, the Examiner did not present any new prior art and hence presumably did not conduct a further search. While the Applicant has filed a RCE and the appropriate fee with the present Response, the Applicant respectfully requests the removal of the "Final" status from the Examiner's Office Action of September 1, 2005 and a refund of the RCE fee.

The Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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